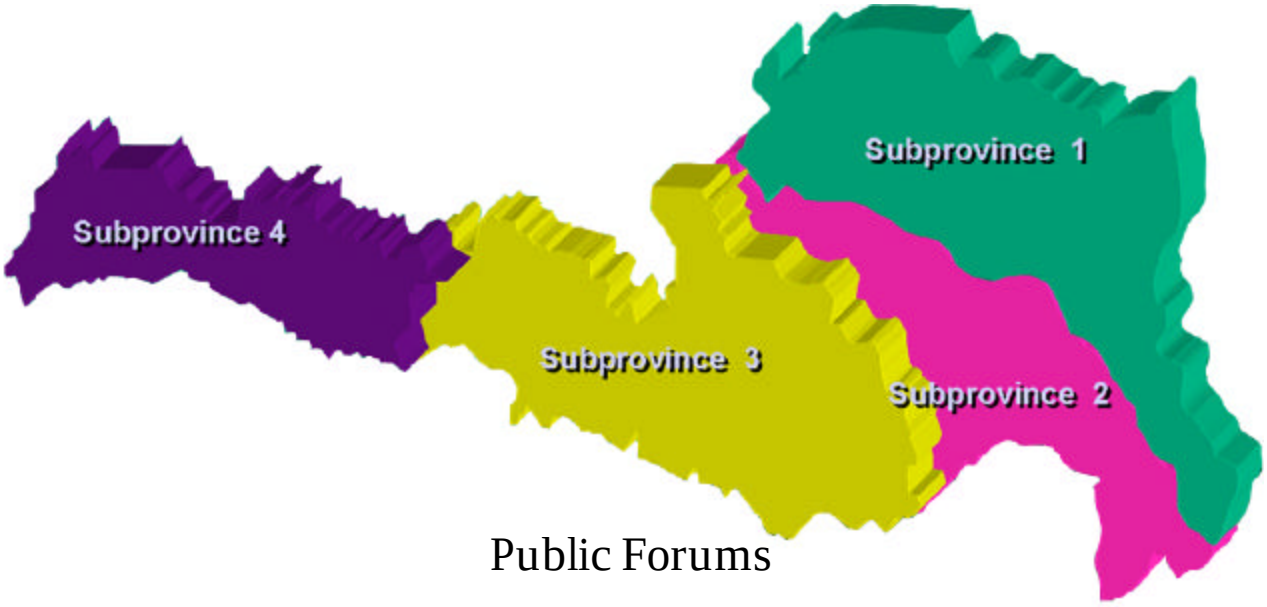
Introduction to Subprovince Alternatives for the LCA Study



Public Forums

Houma – May 27
Lafayette – May 28
Lake Charles – May 29
New Orleans – June 2

In partnership with Louisiana Department of Natural Resources and U. S. Army Corps of Engineers

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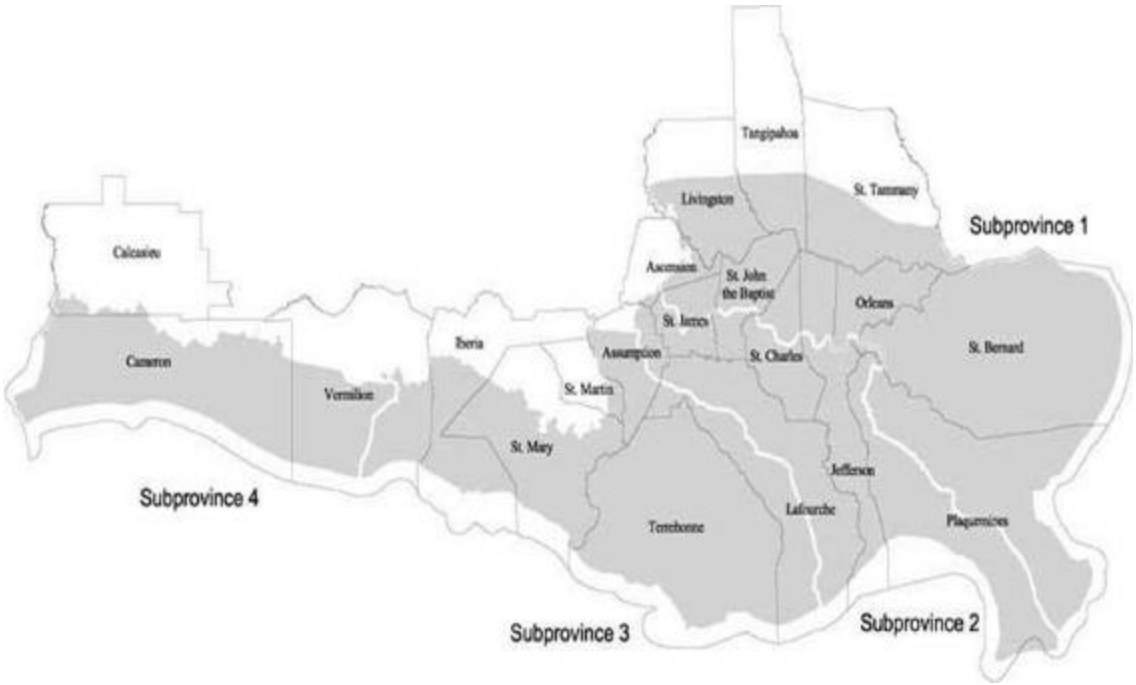
Introduction

The Coast 2050 Planning Process developed Regional Ecosystem Restoration Strategies through a series of 65 public meetings. Many of these strategies were conceptual in nature and required some level of design to examine potential effects of implementing these strategies. In Phase II of the LCA planning process, over one hundred restoration measures were developed. Measures are specific projects, such as freshwater re-introduction (also known as diversion), marsh creation, and barrier island restoration at specific sites. None of these measures represent a single and complete alternative. Therefore, measures must be combined to form alternatives. With so many measures to choose from, the possible combinations appear limitless. The goal, however, is not to develop as many alternatives as possible; rather, it is to examine different approaches for implementing the strategies in the 2050 plan In that sense, the alternatives should represent different hypotheses for testing the various strategies in the 2050 plan. Moreover, the alternatives need to be distinct enough to provide for real choice among them. In planning terminology, the alternatives must be "significantly different."

At the upcoming meetings, the LCA team will discuss these alternatives and their effectiveness. Discussions on these alternatives and how they were put together will be the focus of the open house. This will be followed by orientation and overview on the "no action" plan of the study and what is next in the LCA planning process. Lastly, public participation on the projected effects of these alternatives will take place in an informal and interactive setting. Questions regarding this document or the study in general can be directed to the study managers: Troy Constance at 504-862-2742 and Jon Porthouse at 225-342-9421. Continued public interest and support for the coastal restoration effort is essential to this evolving process.



The nineteen coastal parishes of the Louisiana Coastal Zone divided into the four LCA study subprovinces. White lines designate the subprovince boundaries.

Subprovinces 1 & 2

Problems, Opportunities and Proposed Project Types

Subprovince 1 encompasses the delta estuarine complex east of the Mississippi River, including the entirety of the Pontchartrain and Breton Sound basins and the eastern half of the Mississippi River Delta Basin. The major problems affecting wetland sustainability in this area are altered hydrology, both by isolating the wetlands from the influence of the Mississippi River, and by dredging the Mississippi River-Gulf Outlet (MRGO). In addition, the southern reach of this subprovince experiences some of the highest rates of subsidence in the coastal zone, >3.5 feet per century.

Despite the problems in this subprovince, the area has some of the best opportunities for large-scale sustainable restoration. In the areas north of lakes Maurepas and Pontchartrain, the influence of smaller rivers provides beneficial nourishment to wetlands. In addition, subsidence rates over much of the subprovince are relatively low. Lastly, outside of the Greater New Orleans area, the lands to the east of the Mississippi River are relatively sparsely developed, making reintroduction of riverine influence comparatively less disruptive to communities.

Restoration projects in this area will focus on reintroducing the Mississippi River to the delta plain and strategic application of dredged material to create marsh in critical areas. Closure of the MRGO is the subject of an ongoing study at this time. The LCA Comprehensive Report will include recommendations from the ongoing MRGO sutdy.

Subprovince 2 encompasses the delta complex between the Mississippi River and Bayou Lafourche, including the entirety of the Barataria Basin and the western half of the Mississippi River Delta Basin. The major problems affecting wetland sustainability in this area are altered hydrology, mainly by isolating the wetlands from the influence of the Mississippi River and dredging networks of oil and gas access canals and the Barataria Bay Waterway. While the levees along the river have prevented the nourishment and building of wetlands, the canals have facilitated tidal exchange with interior areas. These interior areas have generally more organic soils and are unable to withstand the increased tidal energy and saltwater influence. As the wetland area has declined, the tidal prism has increased and has contributed to increased barrier shoreline degradation. In addition, the southern reach of this subprovince experiences some of the highest rates of subsidence in the coastal zone, >3.5 feet per century. The western portions of this sub-province are far removed from the existing Mississippi River and the potential to deliver substantial amounts of sediment is relatively low. In addition, the subprovince is comparatively well developed, and this development presents challenges to restoring riverine influence to the area.

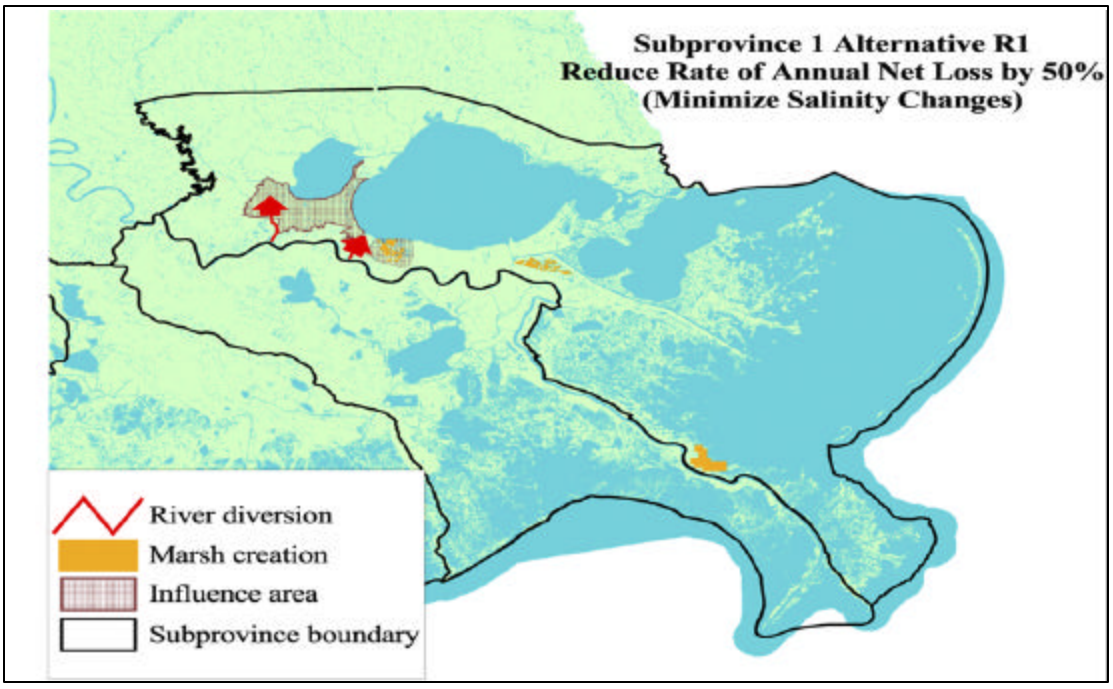
Despite the problems this area is experiencing, the proximity of the entire area to the Mississippi River minimizes the cost of direct river resource utilization. Restoration projects in this sub-province will focus on reintroducing the Mississippi River to the delta plain and strategic application of dredged material to create marsh in critical areas and barrier shorelines. These approaches allow for analysis of the water quality/hypoxia benefits that could be derived from maximum use of freshwater reintroduction.

We examined three different approaches for basin level restoration which relate specifically to the design, operation and ecosystem effects of reintroduction measures. These approaches are minimize salanity changes, continuous reintroduction, and mimic historic hydrolodgy.

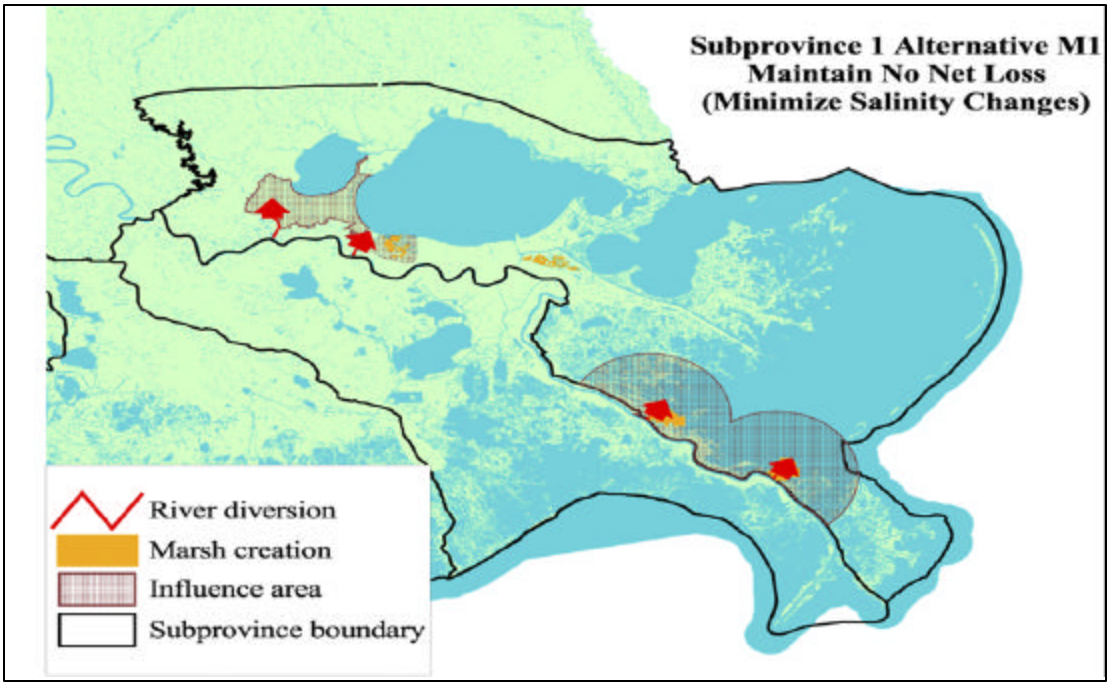
Minimize Salinity Changes

Freshwater reintroductions affect salinity gradients and, therefore, can result in significant ecological changes. Many of the societal and economic benefits currently provided by the ecosystem are currently based on the distribution of marsh types and salinity conditions that have prevailed for several decades. While the long-term goal of freshwater reintroductions is to ensure a healthy, productive, and sustainable coast, such measures can change fisheries and wetland habitat types such that local harvesters and communities can no longer realize these benefits. The question then becomes whether it is possible to minimize such potential changes, while still providing for a sustainable coastal ecosystem. Alternatives consistent with this conceptual framework rely less on freshwater reintroduction and more on marsh creation using external sediment sources (including off-shore and riverine sources). Although the primary measures for building marsh platforms are mechanical, limited freshwater reintroductions are included to help ensure the long-term sustainability of existing and restored wetlands. This approach was applied throughout both subprovinces, with the exception of the upper portion of subprovince 1, where salinity increases are already recognized as a threat to the ecosystem and reducing salinity should be a goal of any alternative.

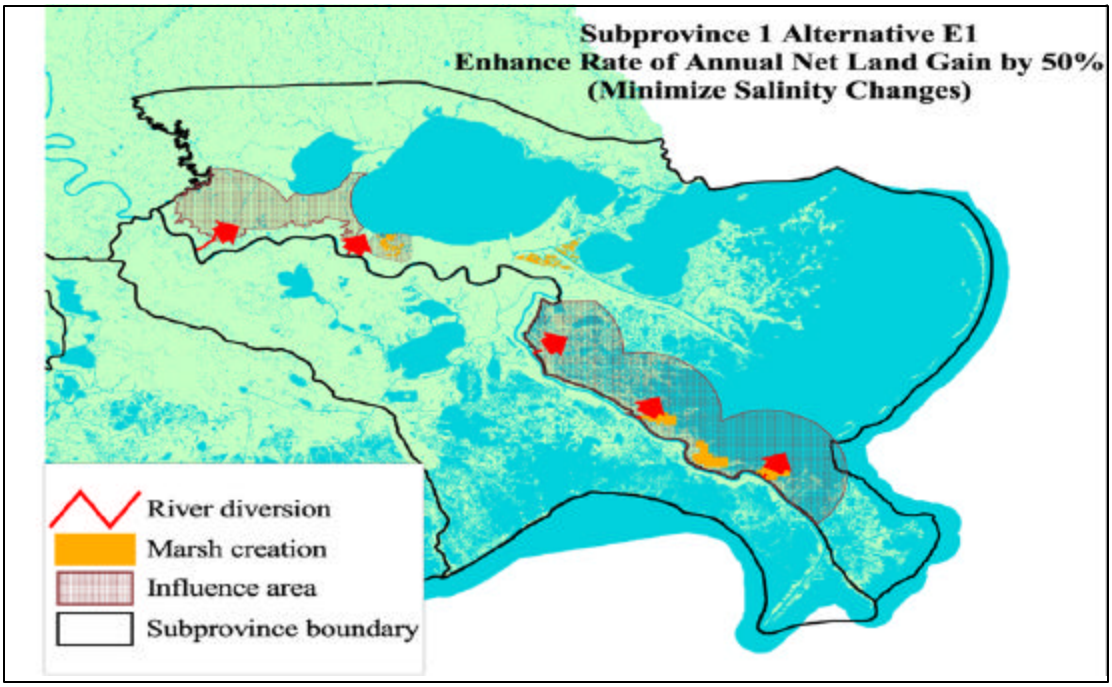
Maps of Minimize Salinity Change Alternatives



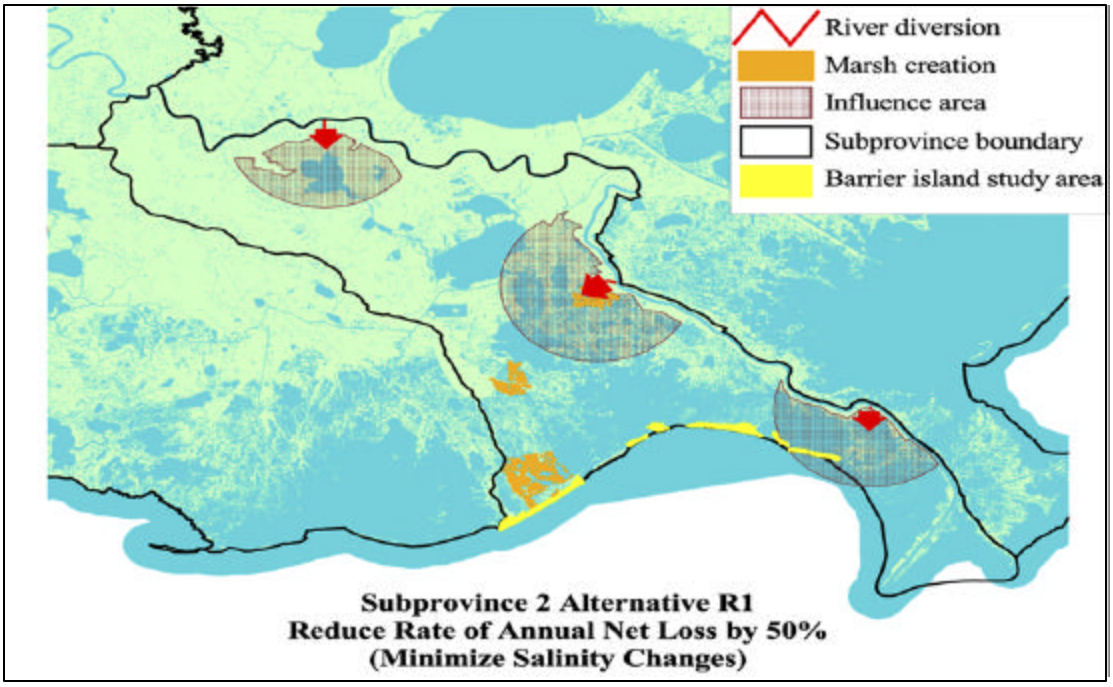
Alternative R1 – Minimize salinity changes
Two small diversions in the upper basin. Sediment delivery/marsh creation near Labranche and Quarantine Bay.



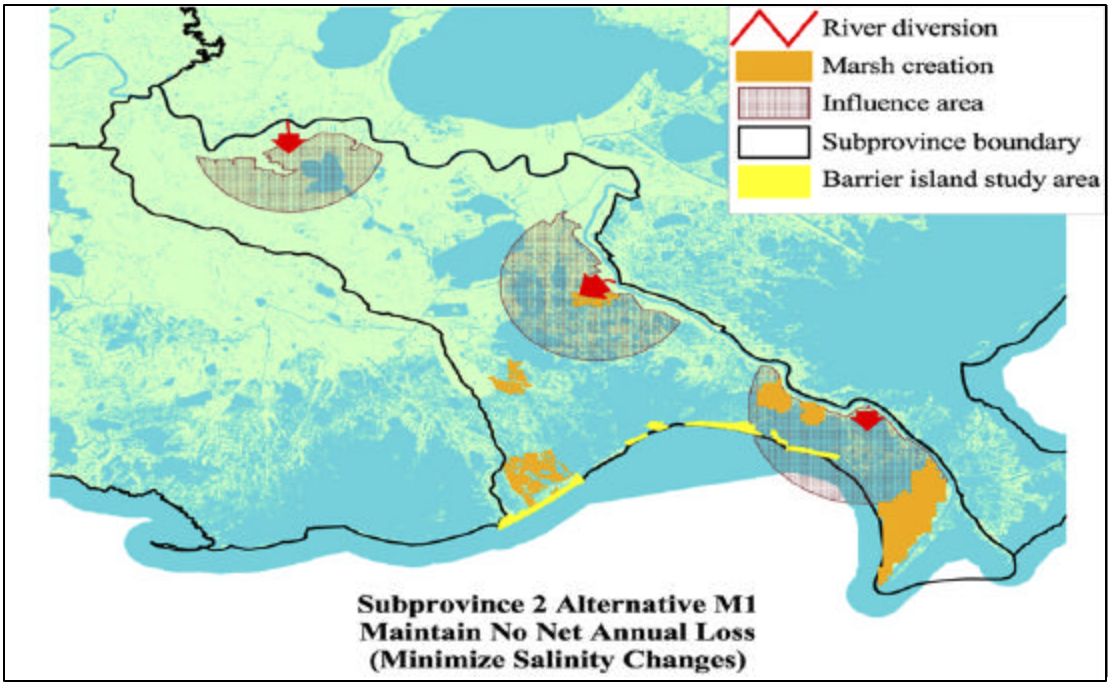
Alternative M1 – Minimize salinity changes
Two small diversions in the upper basin. Two medium sized diversions mid-basin. Sediment delivery/ marsh creation near Labranche, Central Wetlands, American/California Bay, and Ft. St. Philip.



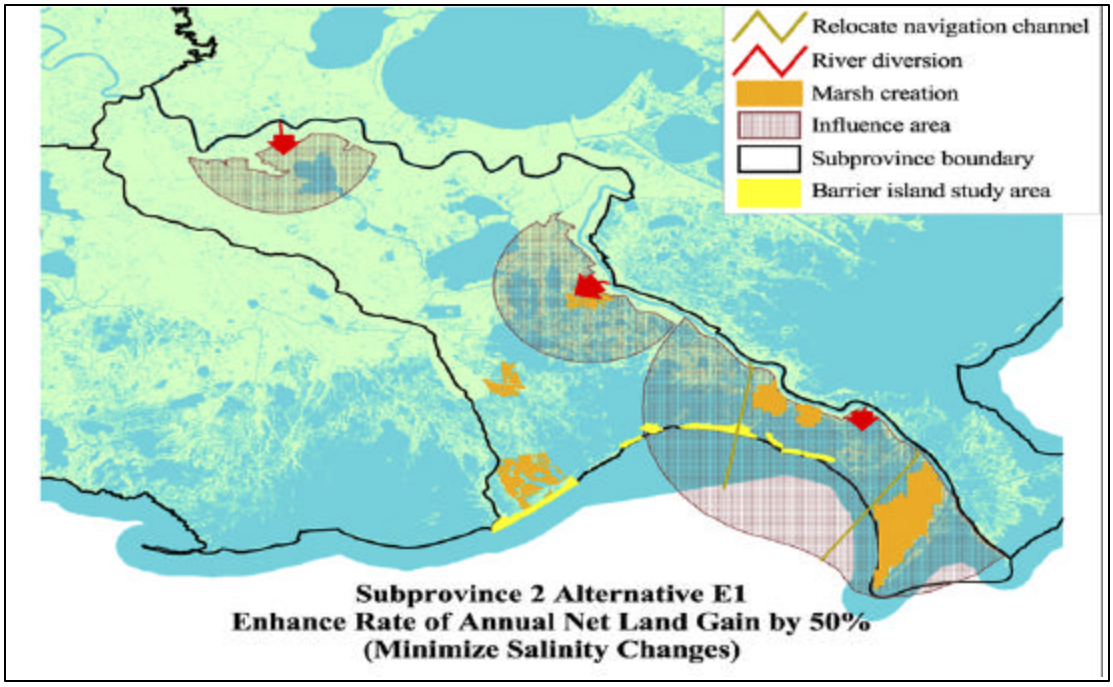
Alternative E1 – Minimize salinity changes
One small and one medium diversion in the upper basin. One small diversion mid-basin. Two medium diversions in the lower basin. Sediment delivery/marsh creation near Labranche, Central Wetlands, Golden Triangle, American/California Bay, Quarantine Bay, and Ft. St. Philip.



Alternative R1 – Minimize salinity changes
One small diversion in the upper basin. One small and one large diversion in the lower basin. Marsh creation with sediment at Myrtle Grove. Feasibility study of barrier shoreline and marsh creation in lower basin.



Alternative M1 – Minimize salinity changes
One small diversin in the upper basin. One small and one large diversion in the lower basin. Sediment delivery near Myrtle Grove, Empire, Bastian Bay, and Main Pass. Feasibility studies of the barrier shoreline and marsh creation in the lower basin.

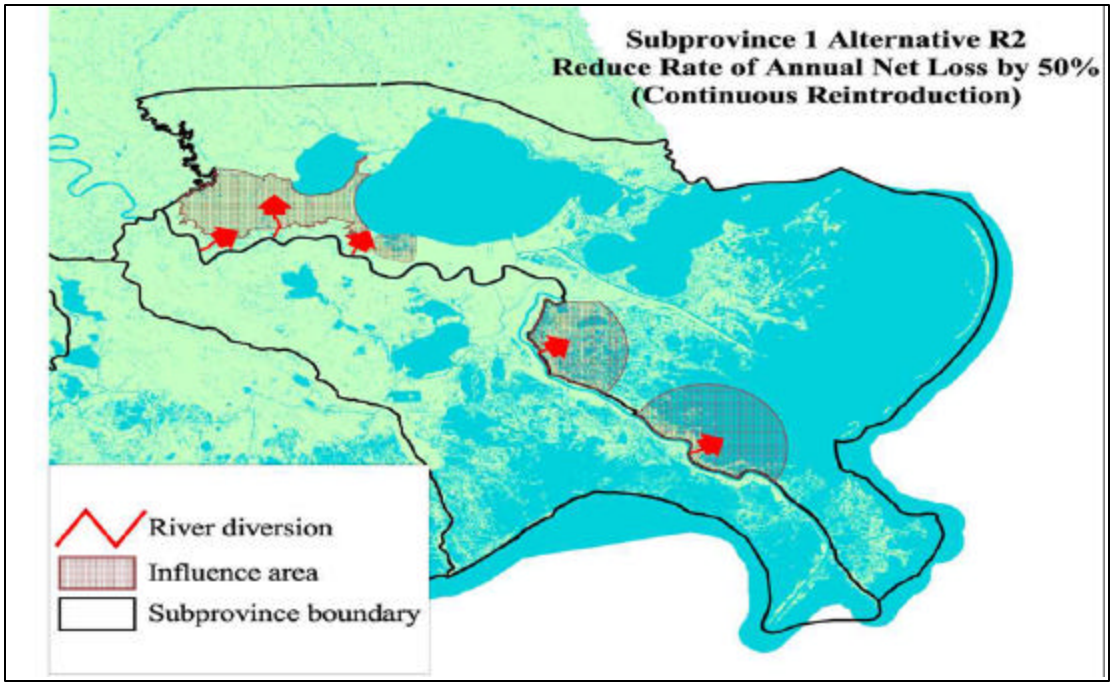


Alternative E1 – Minimize salinity changes
One small diversion in the upper basin. One small and one large diversion in the lower basin. Sediment delivery/marsh creation near Myrtle Grove, Empire, Bastian Bay, Main Pass, and from the river to marsh creation sites. Relocate main navigation channel.

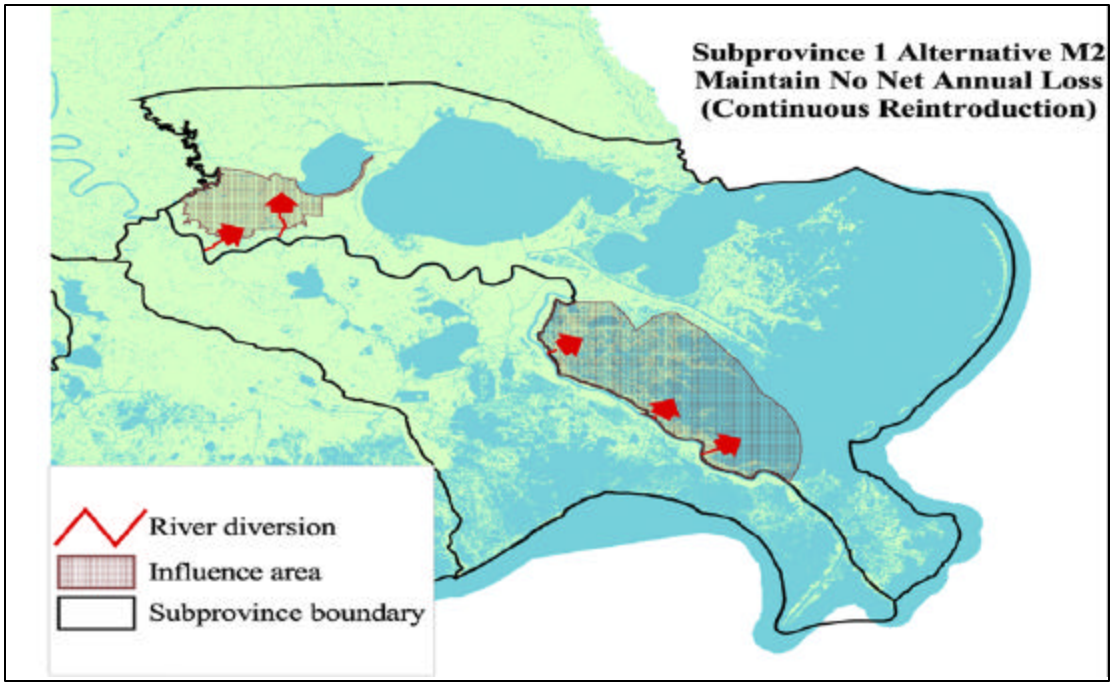
Continuous Reintroduction

In coastal Louisiana, the existing freshwater reintroduction projects (such as Davis Pond and Caernarvon) are for the most part operated with a continuous (i.e., year-round) flow, with discharge volume varying according to river stages and ceasing when river stages are too low. The existing reintroduction projects are relatively small compared to the far larger projects being contemplated in the LCA process. It is likely that the same approach to year-round reintroduction of water would provide effects at the larger scale that are not apparent with the existing diversions. Moreover, given that the natural deltaic process has been massively disrupted, the existing projects still fall far short of meeting the freshwater, nutrient, and sediment needs of Subprovinces 1 and 2. By developing alternatives around a "continuous reintroduction" approach, the LCA process will be able to assess the potential benefits and costs of using more and larger reintroductions that operate year-round.

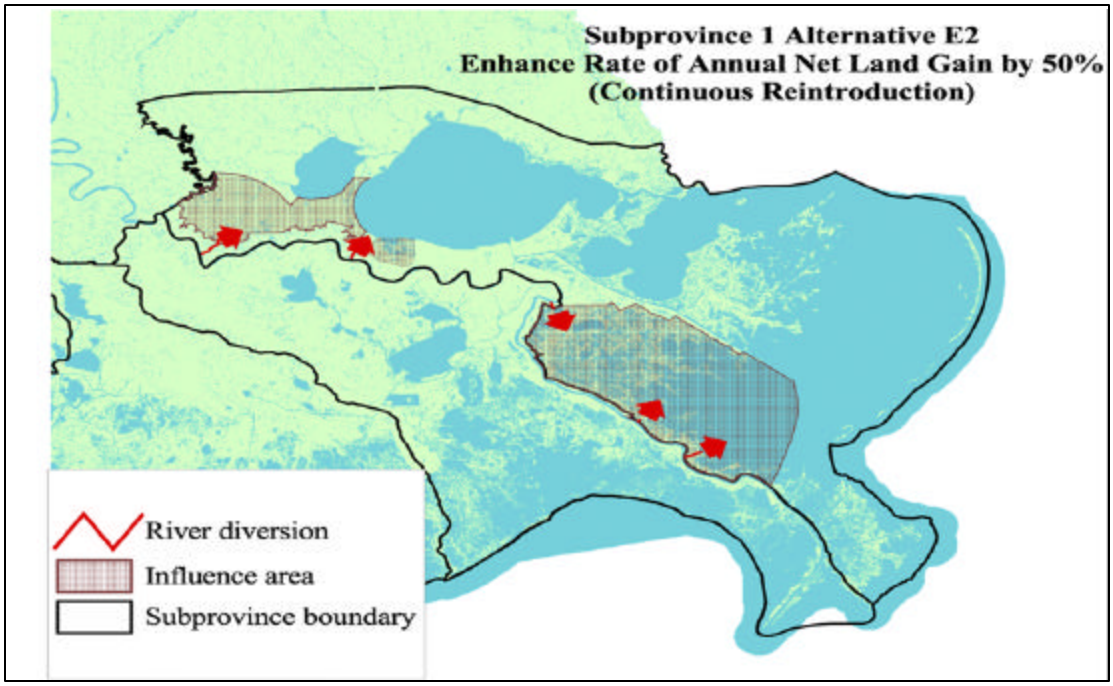
Maps of Continuous Reintroduction Alternatives



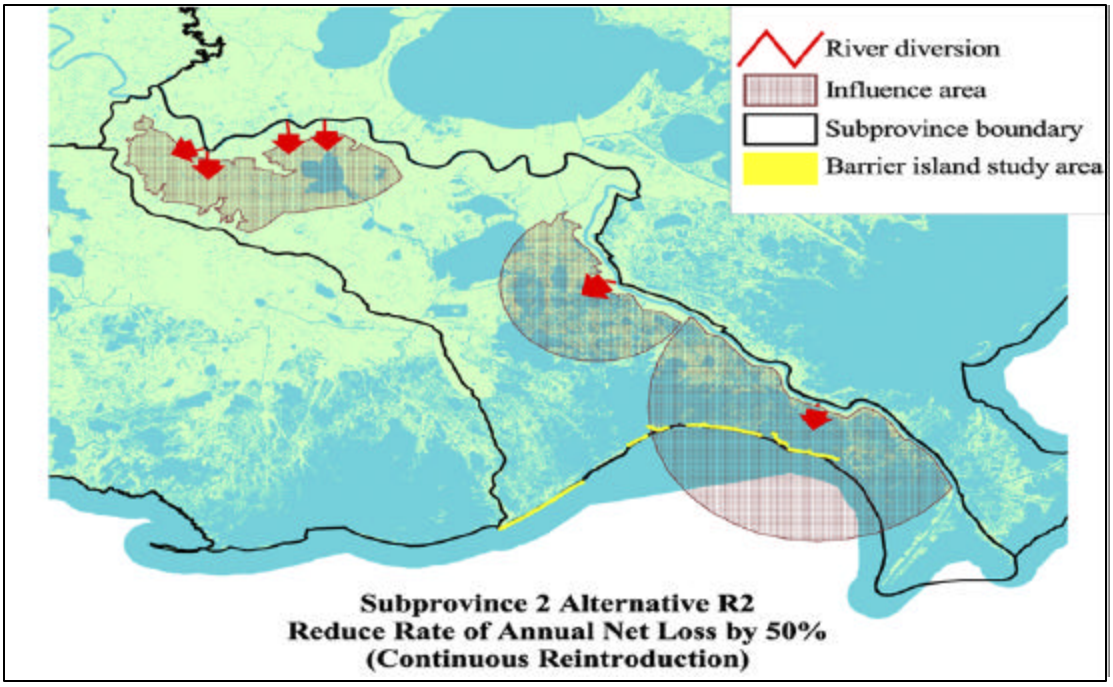
Alternative R2 – Continuous reintroduction
Three small diversion in the upper basin and one medium diversion in mid-basin. Repair and use the Bayou Lamoque structures for a medium diversion.



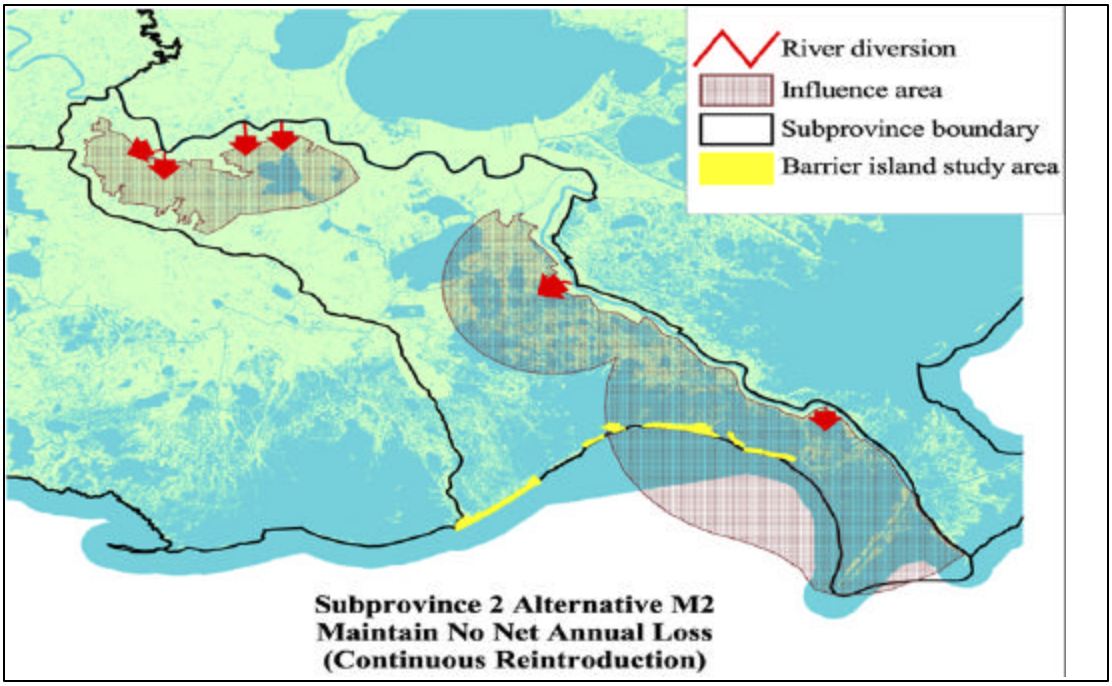
Alternative M2 – Continuous reintroduction
Two small diversions in the upper basin. One medium diversion mid-basin. One large diversion in the lower basin. Repair and use the Bayou Lamoque structures for a medium diversion.



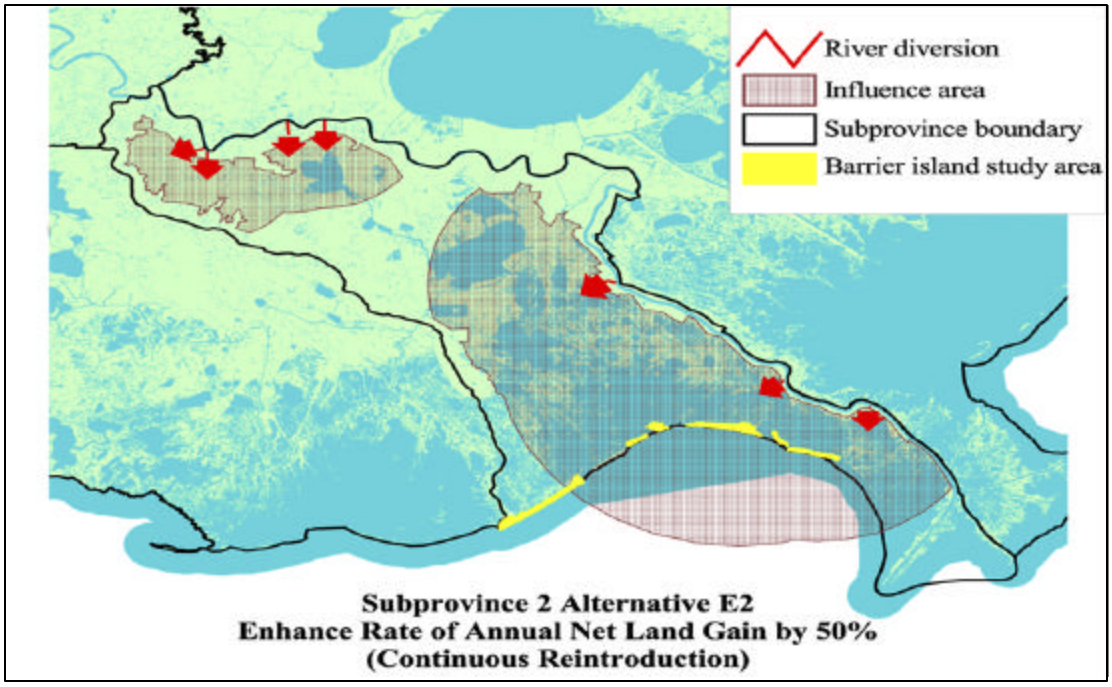
Alternative E2 – Continuous reintroduction
Two medium diversions in the upper basin. Mid-basin with one large diversion which will include sediment enrichment. One medium diversion in the lower basin. Repair and use Bayou Lamoque structures for a medium diversion.



Alternative R2 – Continuous reintroduction
Four small diversions in the upper basin. One medium sized and one large diversion in the lower basin. Feasibility study of barrier shoreline.



Alternative M2 – Continuous reintroduction
Four small diversions in the upper basin. One medium sized and one large diversion in the lower basin both with sediment enrichment. Feasibility study of the barrier shoreline.

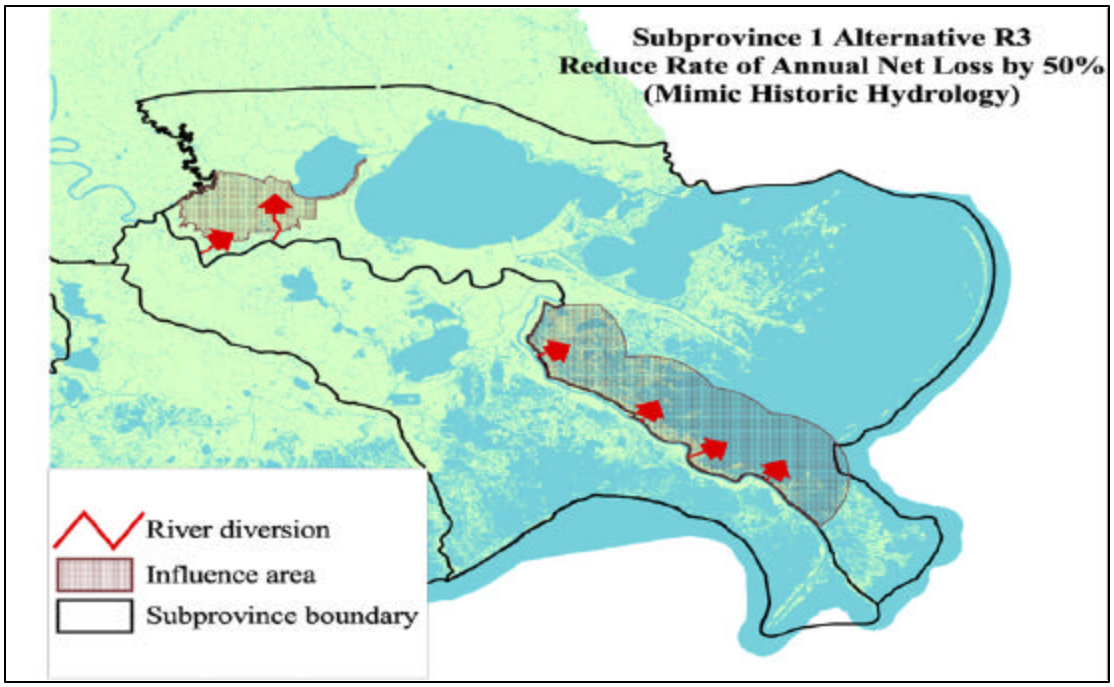


Alternative E2 – Continuous reintroduction
Four small diversion in the upper basin with sediment enrichment. Three large diversions in the lower basin, two with sediment enrichment/marsh creation. Feasibility study of the barrier shoreline.

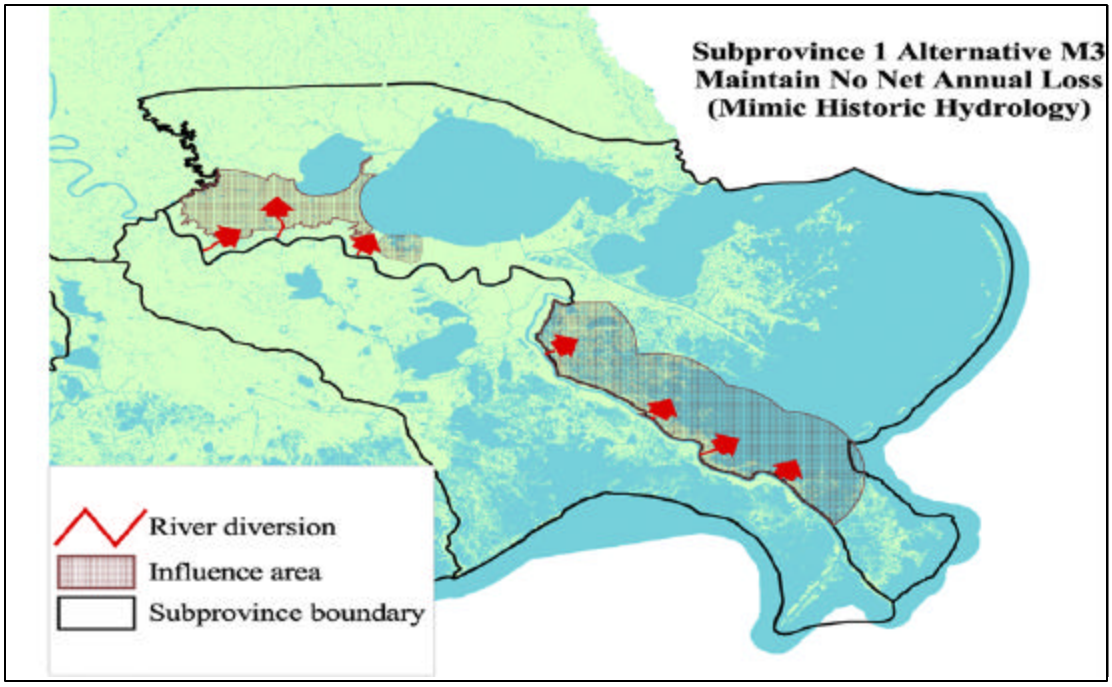
Mimic Historic Hydrology

Alternatives under this approach are based on the assumption that historic hydrologic regimes (apart from river switching) in the Deltaic province were characterized by numerous, smaller seasonal freshwater inflows (from over-bank flow, small distributaries and/or minor crevasses) combined with relatively short-term episodes of large freshwater inflows due to major, flood-induced crevasses. Alternatives designed under this approach tend toward including numerous, smaller reintroductions combined with large reintroduction projects to be operated in periodic "pulsing" events. Where appropriate, alternatives under this approach also include sediment enrichment of reintroduction waters to mimic the historically higher sediment loads in the Mississippi River.

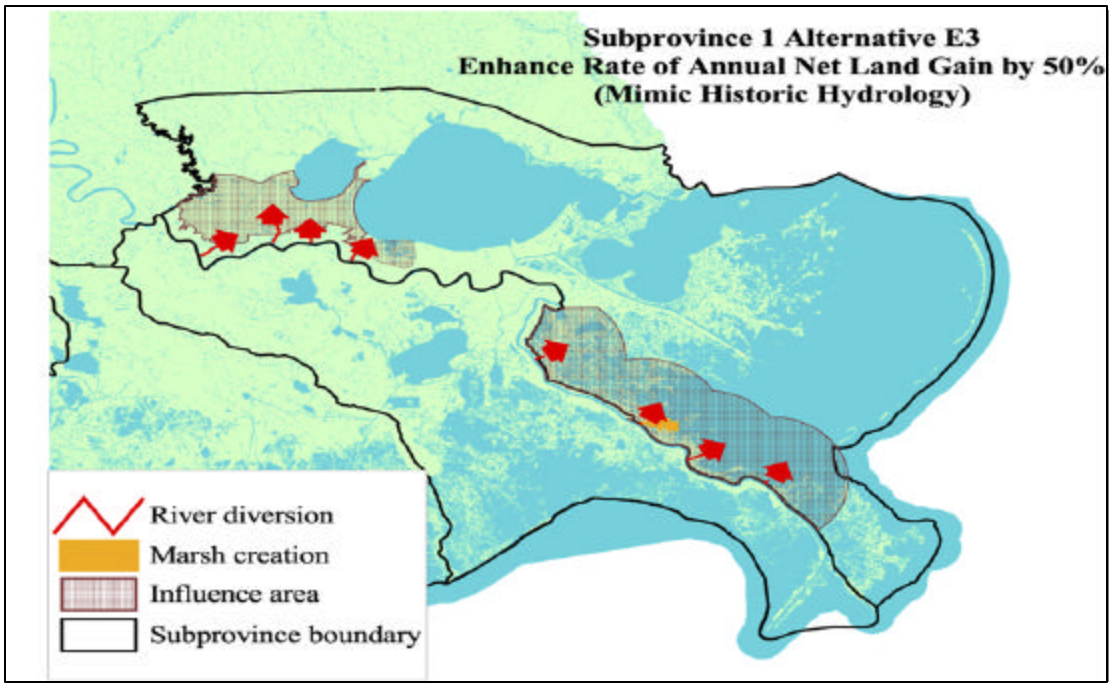
Maps of Mimic Historic Hydrology Alternatives



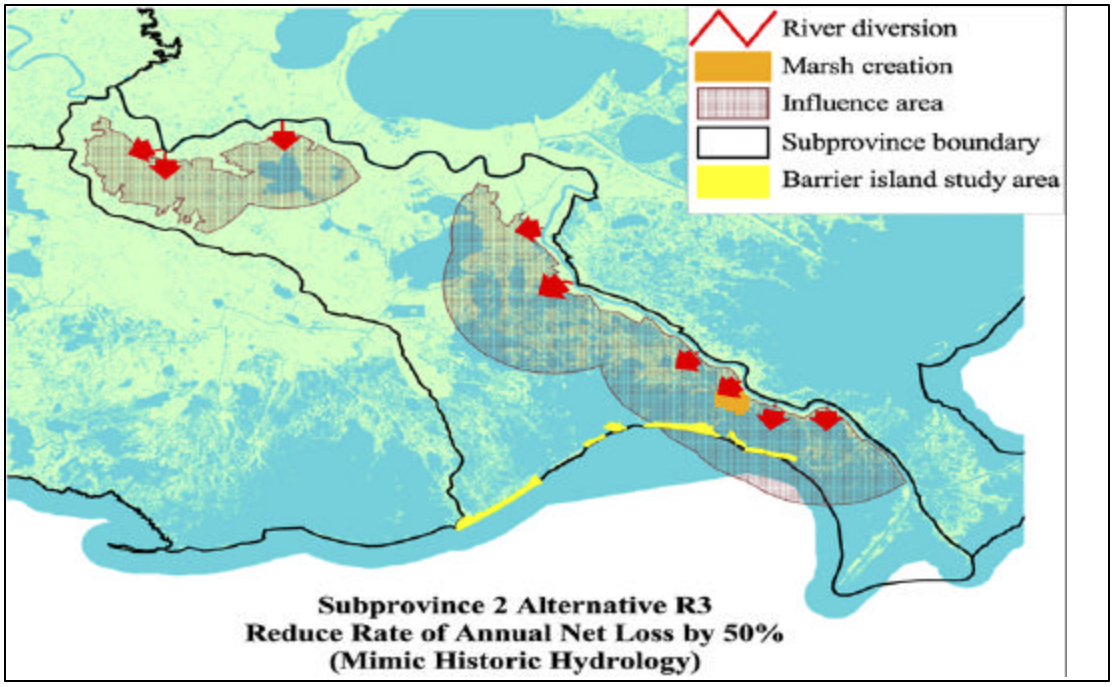
Alternative R3 – Mimic historic hydrology
Two small diversions in the upper basin. One medium diversion mid-basin. One medium and one large diversion with sediment enrichment in the lower basin. Repair and use the Bayou Lamoque structures for medium diversion.



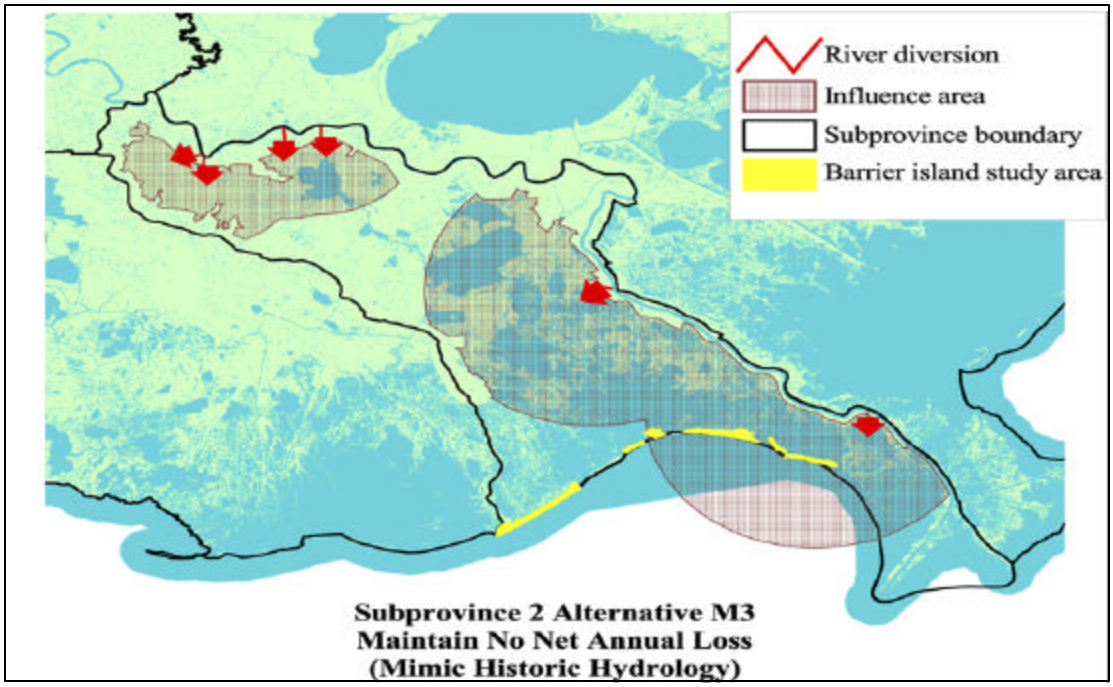
Alternative M3 – Mimic historic hydrology
Two small diversions and one medium sized diversion in the upper basin. One medium diversion mid-basin. In the lower basin one medium and one large diversion, both would include a sediment enrichment. Repair and use Bayou Lamoque structures for medium diversion.



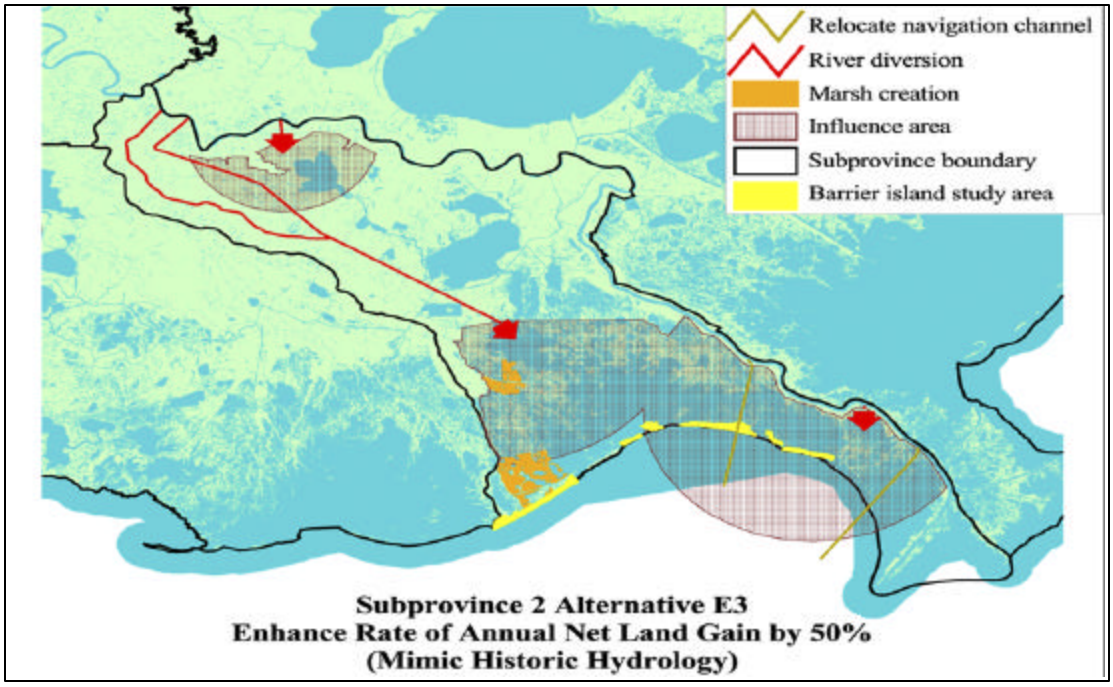
Alternative E3 – Mimic historic hydrology
Three small diversions and one medium diversion in the upper basin. One medium diversion mid-basin. In the lower basin two large diversions which will include sediment enrichment. Repair and use Bayou Lamoque structures for medium diversion. Sediment delivery/marsh creation at American/California Bay.



Alternative R3 – Mimic historic hydrology
Three small diversions in the upper basin. Five small diversions and one large diversion with sediment enrichment in the lower basin. Sediment delivery near Empire. Feasibility Study of barrier shoreline.



Alternative M3 – Mimic historic hydrology
Four small diversions in the upper basin. Two large diversions in the lower basin both with sediment enrichment. Feasibility study of the barrier shoreline.



Alternative E3 – Mimic historic hydrology
One small diversion with sediment delivery in the upper basin. In the lower basin, one large diversion and Third Delta with sediment enrichment. Sediment delivery/marsh creation in lower basin. Relocate main navigation channel. Feasibility study of the barrier shoreline.

Subprovince 3

Problems, Opportunities and Proposed Project Types

Subprovince 3 encompasses the delta complex between Bayou Lafourche and the Freshwater Bayou Canal, including the entirety of the Terrebonne, Atchafalaya, and Teche-Vermilion basins. This subprovince is unique among the four subprovinces in that it encompasses the only area along the coast that experiences significant natural delta building. The influence of the Atchafalaya River not only develops land in Atchafalaya Bay, but reduces land loss in the Teche-Vermilion Basin and contributes to shoreline accretion in the Chenier Plain. The subprovince also includes Terrebonne Basin which is the furthest removed from any active river system and is thus the hardest to re-establish land building and nourishment functions. The Terrebonne Basin is experiencing some of the highest land loss rates within the delta plain, due mainly to altered hydrology associated with damming of Bayou Lafourche, the dredging of oil and gas access canals and the Houma Navigation Canal. The Belle Pass jetties on the Fourchon Headland has contributed to a disruption of sediment transfer from the headland to the Timbalier Barrier Island Chain, and barrier shoreline degradation in general has caused an increase in tidal exchange within the basin. Increased tidal prism further contributes to the degradation of the barrier shoreline system.

Although the problems and needs are severe in the Terrebonne Basin, the opportunities for rehabilitation are relatively low. Reintroduction of natural land-building and nourishing functions are likely to be costly and the uncertainty of effectiveness is relatively high. The western two thirds of the subprovince, however, is relatively stable and projected to remain so.

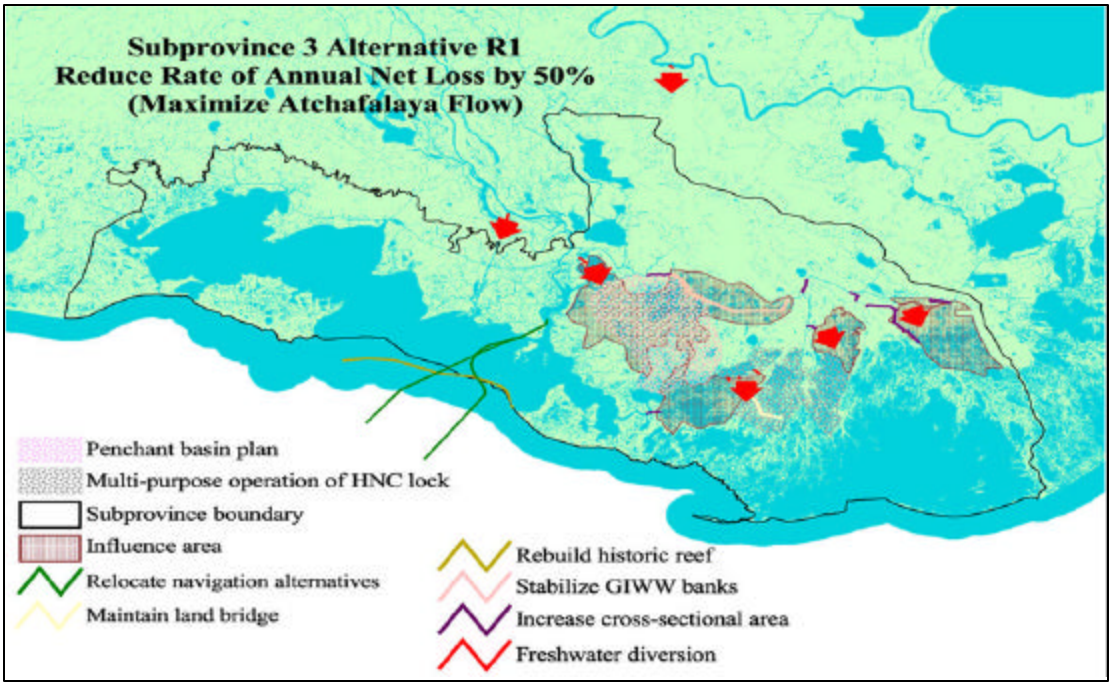
Restoration projects in this subprovince will focus on restoration and protection of barrier shorelines, introducing river influence from the Mississippi and Atchafalaya Rivers to critical areas, strategic application of dredged material to create marsh in critical areas, and maximizing delta building in Atchafalaya Bay.

The approaches for Subprovince 3 reflect both the opportunities and the constraints facing wetland restoration in this area. The approaches are maximize Atchafalaya flow, land building by delta development, maximize geomorphic features, and a hybrid approach combining the other approaches.

Maximize Atchafalaya Flow

The ongoing deltaic land growth at the mouth of the Atchafalaya River and Wax Lake Outlet is both a rare source of new wetland acres in coastal Louisiana and a clear example of the benefits that can be derived from restoring deltaic processes. Alternatives developed under this approach seek to enhance to the maximum extent possible the ongoing land growth, while also redirecting Atchafalaya waters to help nourish wetlands in Terrebonne basin. In addition to improving natural deltaic processes, alternatives under this approach would involve mechanical measures (i.e., sediment delivery) to further expedite and enhance land growth. Increased flows down the existing Bayou Lafourche will also be assessed as a means for reducing loss rates in eastern Terrebonne basin. Finally, alternatives under this approach will include measures designed to rehabilitate or maintain important geomorphic features, including barrier islands, land bridges, and gulf shorelines.

Map of Maximize Atchafalaya Flow Alternative

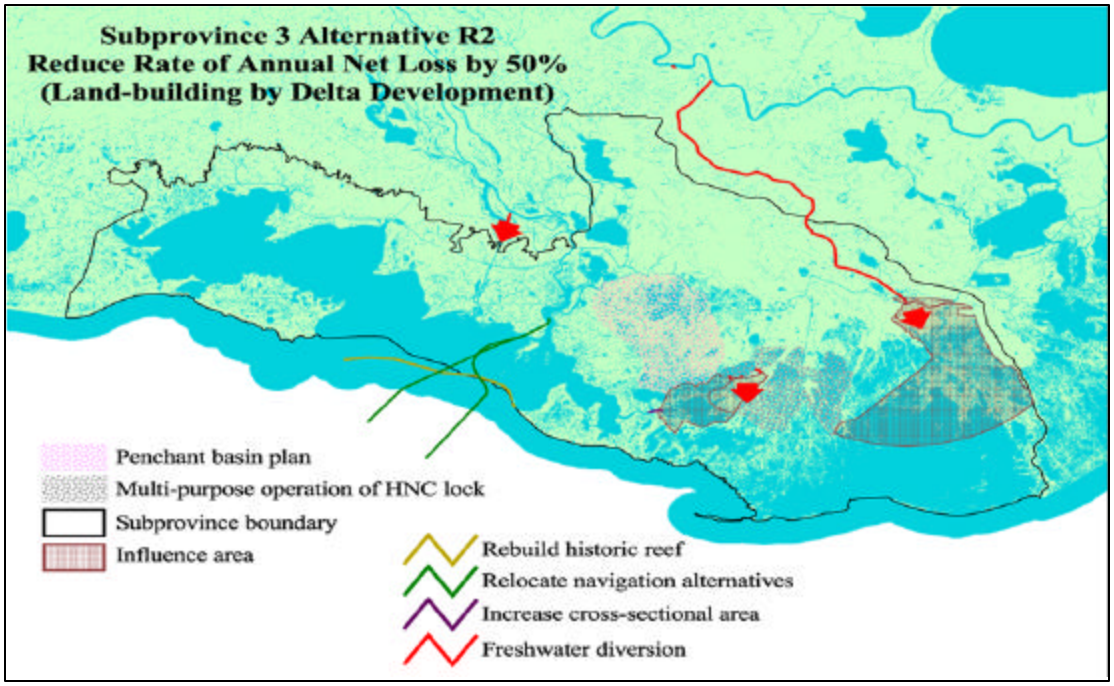


Alternative R1 – Maximize Atchafalaya Flow
Increase sediment transport from Mississippi River to Atchafalaya River. Increase sediment transport from Atchafalaya Main Channel to Wax Lake Outlet delta. Relocate Atchafalaya Bay navigation channel to bypass deltas. Rebuild Point au Fer Barrier Reef to increase sediment retention in deltas. Maximize and manage Atchafalaya River discharge across Terrebonne Basin. Enhance Bayou Lafourche flows with a small diversion from Mississippi River. Build Houma Navigation Canal lock and maintain landbridge between Bayous DuLarge and Grand Caillou.

Land Building by Delta Development

Given the challenge of reintroducing significant amounts of freshwater, sediments, and nutrients to the eastern portion of Subprovince 3, it would take a massive effort to re-establish deltaic land growth in the area. The only measure potentially capable of doing so is the "Third Delta," an ambitious proposal to create a massive new distributary channel from the Mississippi River to both Barataria and Terrebonne basins. To assess the effects of such a measure, alternatives developed under this approach would center on implementation of the Third Delta. While relying primarily on this new distributary channel, these alternatives would also include moderate, complementary efforts to enhance Atchafalaya delta development, move Atchafalaya waters to the east, and restore critical geomorphic features.

Map of Land Building by Delta Development Alternative

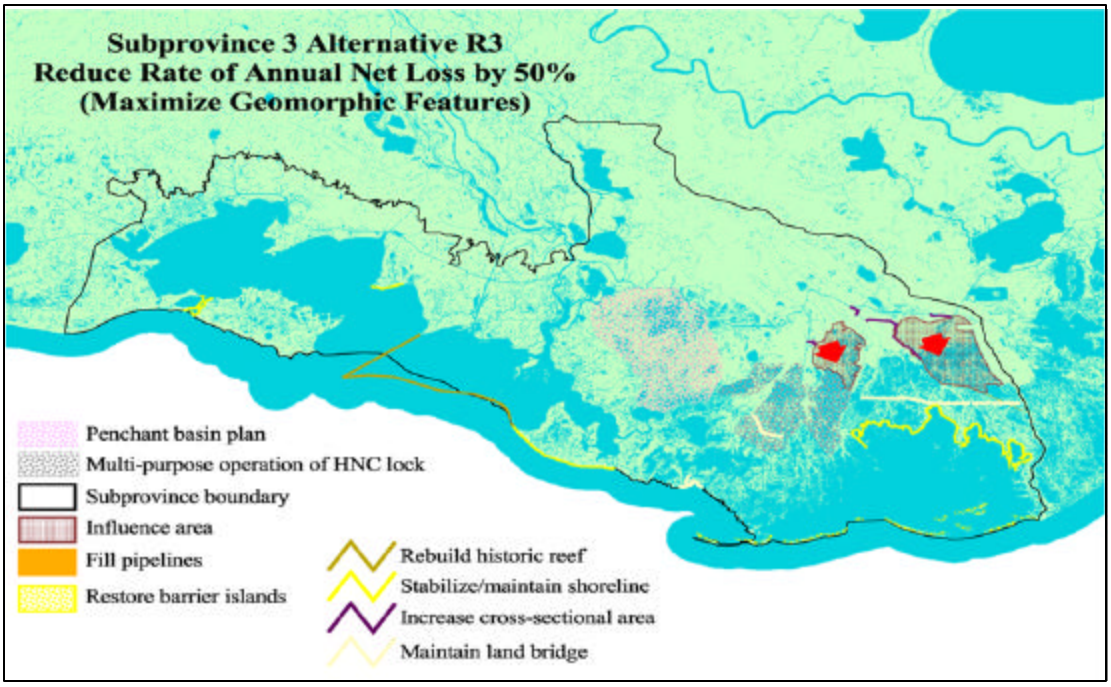


Alternative R2 – Land-building by Delta Development using Mississippi and Atchafalaya Resources Divert Mississippi River in small diversion to enhance Bayou Lafourche and a large diversion would be built to the eastern Terrebonne Basin (Third Delta). Increase sediment transport from Mississippi River to Atchafalaya River. Increase sediment transport from Atchafalaya Main Channel to Wax Lake Outlet delta. Relocate Atchafalaya Bay navigation channel to bypass deltas. Rebuild Point au Fer barrier reef to increase sediment retention in deltas. Moderately increase and manage Atchafalaya River discharge in southwestern Terrebonne and Penchant basins. Mimic ridge function with Houma Navigation Canal lock.

Maximize Geomorphic Features

This approach focuses primarily on rehabilation maintance of geomorphic features to reduce the loss of wetlands and to a lesser extent, increase the efficiency of delta growth. Secondarily, this approach improves management of Atchafalaya River influence across Terrebonne Basin.

Map of Maximize Geomorphic Features Alternative

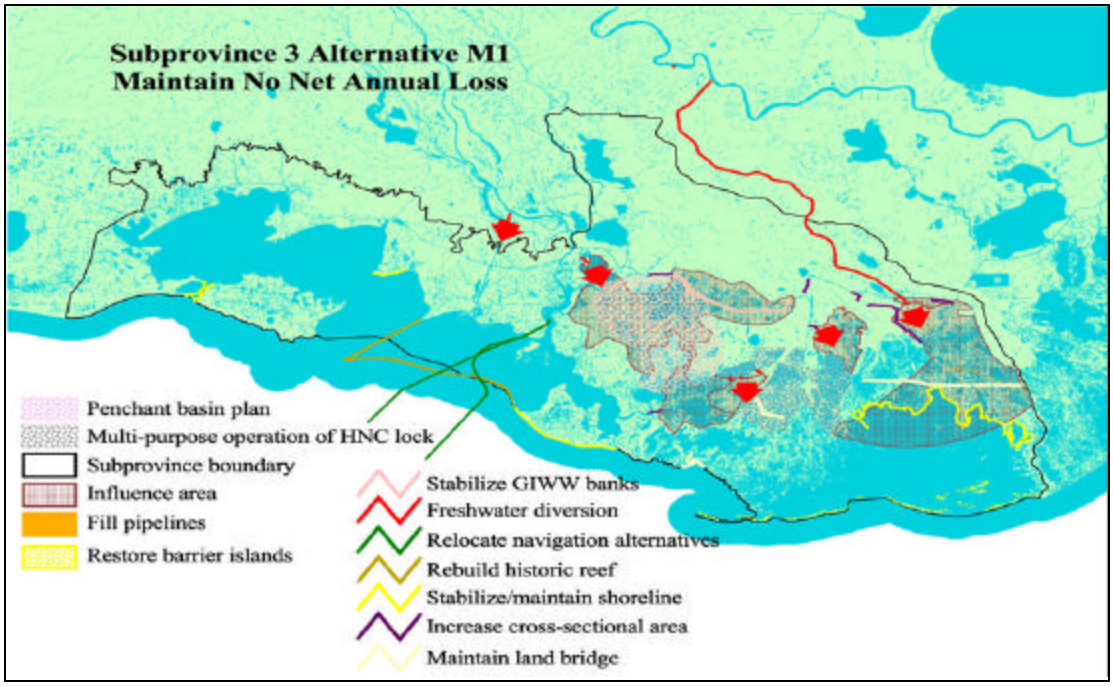


Alternative R3 – Maximize Geomorphic Features
Stabilize and maintain banks and shorelines near Southwest Pass, East Cote Blanche Bay at Point Marone, Terrebonne/Timbalier Bays, and Point Au Fer Island. Rebuild and enhance historic reefs between Point Chevreuil, Marsh Island, Point Au Fer, Eugene Island. Mimic ridge function with Houma Navigation Canal lock near Bayou Grand Caillou. Build or maintain ridges and landbridges between Bayou Dularge and Grand Caillou, between Sister Lake and the Gulf. Rehabilitate Terrebonne barrier shoreline.

Maximize Geomorphic Features and River Influence

Due to the extreme loss rates in this subprovince, we combined all available measures to maximize net gain of wetlands. Alternatives developed under this approach represent a hybrid of the three former approaches. Specifically, this alternative would employ both the Third Delta and more extensive efforts to enhance Atchafalaya delta development and move Atchafalaya waters to the east, while also maximizing efforts to rehabilitate and maintain critical geomorphic features.

Map of Maximize Geomorphic Features and River Influence Alternative



Alternative M1

Divert Mississippi River in small diversion to enhance Bayou Lafourche and a large diversion would be built to the eastern Terrebonne Basin (Third Delta). Increase sediment transport from Mississippi River to Atchafalaya River. Increase sediment transport from Atchafalaya Main Channel to Wax Lake Outlet delta. Relocate Atchafalaya Bay navigation channel to bypass deltas. Rebuild Point au Fer barrier reef to increase sediment retention in deltas. Maximize and manage Atchafalaya River discharge across Terrebonne Basin. Build Houma Navigation Canal lock and maintain landbridges across central and eastern Terrebonne Basin (between Bayou Grand Caillou and Bayou Dularge, between and Sister Lake and the Gulf, and between Bayou Terrebonne and Bayou Lafourche). Rehabilitate Terrebonne barrier shoreline. Reestablish historic Point Chevreuil to Marsh Island reef complex. Stabilize and maintain banks and shorelines near Southwest Pass, East Cote Blanche Bay at Point Marone, Terrebonne/Timbalier Bays, and Point Au Fer Island. Backfill pipeline canals near South Catfish Lake.

Subprovince 4

Problems, Opportunities and Proposed Project Types

Subprovince 4 encompasses the Chenier Plain between the Freshwater Bayou Canal and the Louisiana-Texas Border, including the entirety of the Mermentau and Calcasieu-Sabine basins. The problems affecting wetland sustainability in this subprovince are mainly altered hydrology. The three major rivers in the area all have navigation canals and jetty systems which disrupt long shore sediment distribution patterns and increase tidal exchange of energy and salt water into interior areas. The Upland Sub-basin of the Mermentau River has been altered to facilitate drainage by straightening and deepening the tributary channels. This has caused flood waters to reach the Mermentau Lakes Sub-basin faster where it is isolated from further drainage by a series of water control structures. These structures were built to minimize saltwater intrusion and maintain a freshwater reservoir for farming. The operation of this system leads to flushing of fresh water to the Gulf in the winter when water is plentiful, making this fresh water unavailable for the summer months when it is needed for agriculture and wetland sustainability.

There are several opportunities which may facilitate wetland restoration in this subprovince. Subsidence rates and depth of organic soil coverage in the area are comparatively low. Restoration of upland areas in this subprovince has the potential to alleviate some of the fresh water deficits which are currently being experienced in the coastal areas. In addition, dredged material is readily available from several navigation channels to create and nourish wetlands.

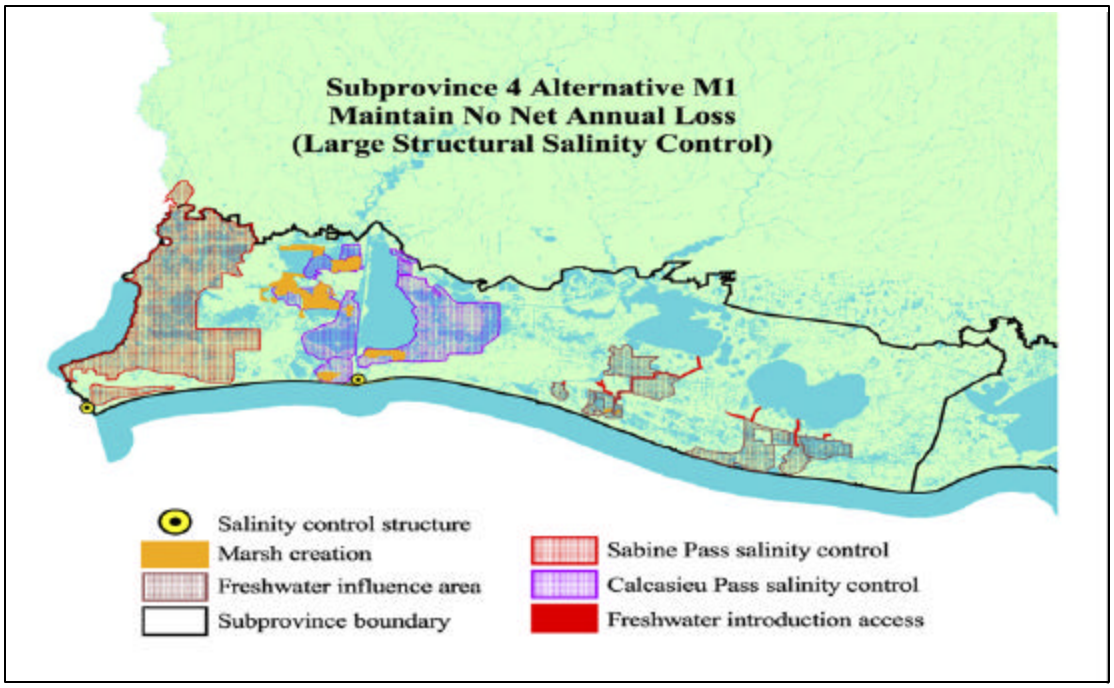
Restoration projects in this subprovince will focus on reducing tidal exchange between the Gulf of Mexico and interior areas to more historic conditions. This may be accomplished by restriction of the cross section at the Gulf shoreline or at interior bayous. Also, we will focus on restoring a more natural seasonality to freshwater inflows and maximizing the influence area of the available freshwater. Maintenance of Gulf shorelines is also a high priority.

Accordingly, the alternatives in Subprovince 4 represent different ways to address the fundamental problem of increased salinities. The approaches are large structural salinity control, perimeter structural salinity control and structural and freshwater introduction salinity control.

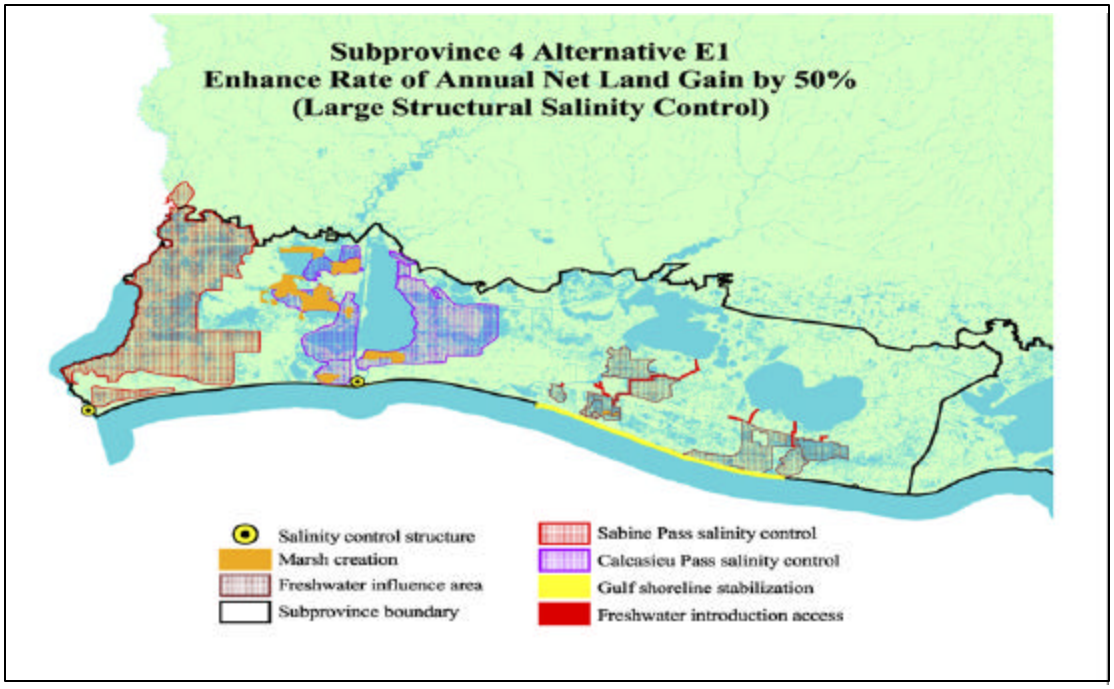
Large Structural Salinity Control

The foundation of alternatives developed under this approach is large-scale salinity control structures (i.e., locks/gates) at Calcasieu Pass and Sabine Pass. Such structures would be designed and operated to minimize the salinity increases caused by the deepening of these passes for navigation purposes. Theoretically, implementation of such an alternative could allow for modification or removal of existing upstream salinity control measures, thereby supporting the restoration of a more natural and less-managed hydrologic regime throughout the subprovince.

Maps of Large-scale Salinity Control Alternatives for Subprovince 4



Alternative M1 – Large Structural Salinity Control
Control salinity with structures at Calcasieu Pass and Sabine Pass. Introduce freshwater across Hwy 82 in several locations throughout the Mermentau Basin. Utilize the Calcasieu Ship Channel for beneficial use/ marsh creation.

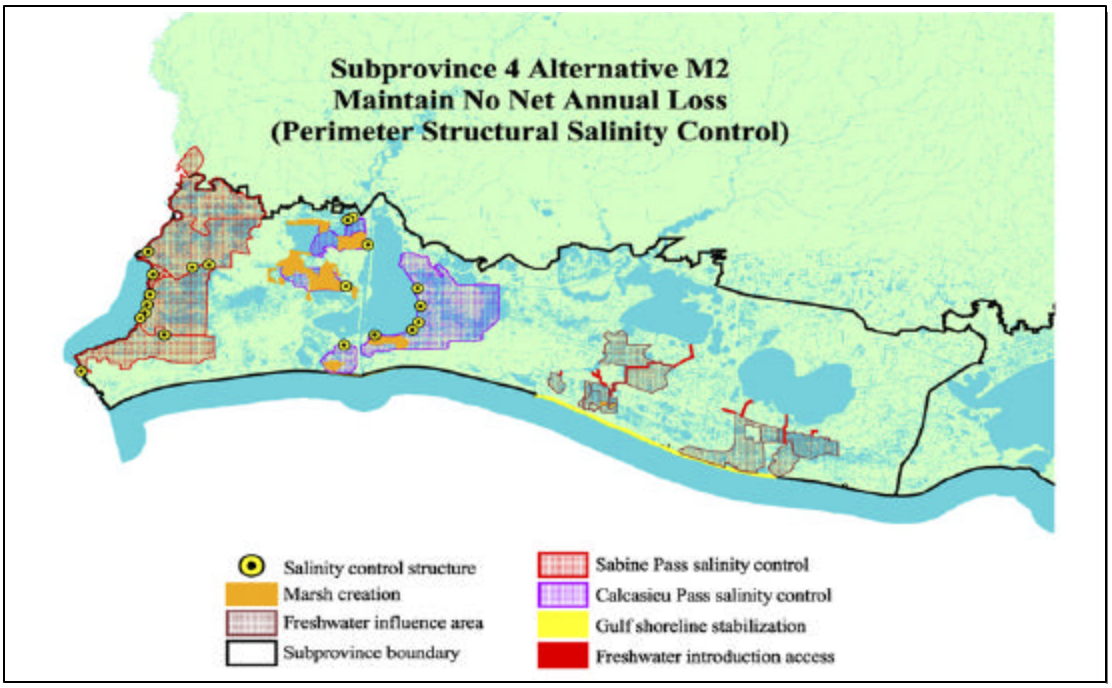


Alternative E1 – Large Structural Salinity Control
Control salinity with structures at Calcasieu Pass and Sabine Pass. Introduce freshwater across Hwy 82 in several locations throughout the Mermentau Basin. Utilize the Calcasieu Ship Channel for beneficial use/ marsh creation. Stabilize Gulf Shoreline from Mermentau Ship Channel to near Rollover Bayou.

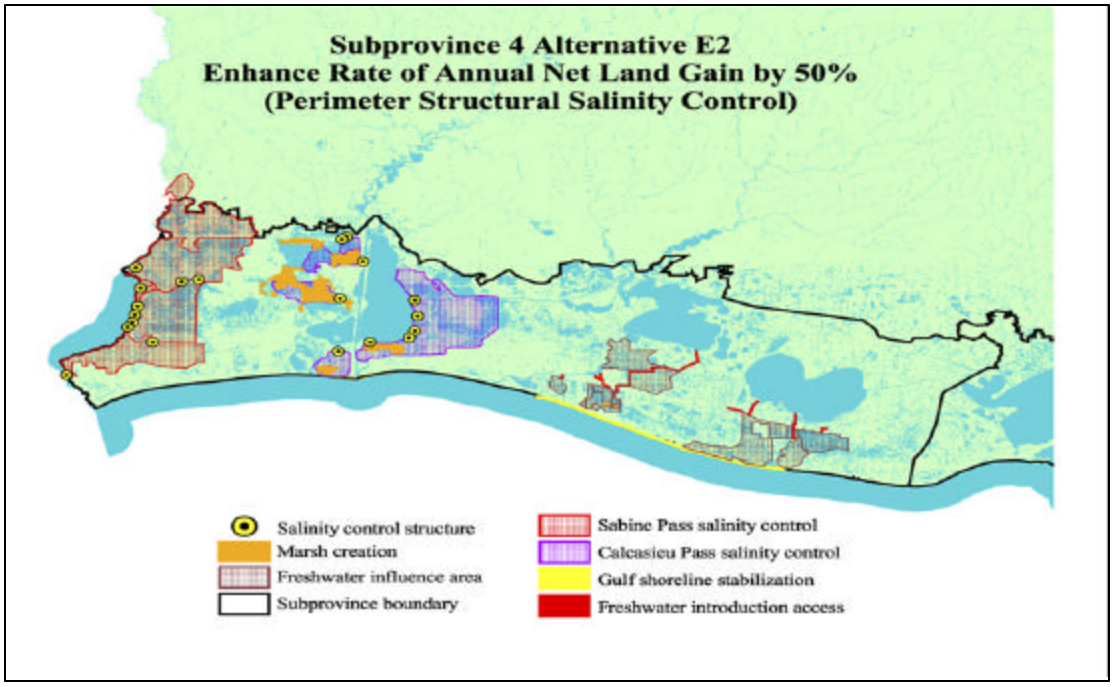
Perimeter Structural Salinity Control

Alternatives developed under this approach are intended to reduce salinity impacts, while also avoiding any potential effects that locks/gates on the Calcasieu and Sabine Passes may have on navigation. Specifically, this group of alternatives would include small-scale salinity control measures around the perimeters of Calcasieu and Sabine Lakes; thereby reducing saltwater intrusion to adjacent wetlands and waterways. Such structures would be state-of-the-art, designed to minimize disruption of organism and material linkages. However, unlike the large-scale salinity control alternatives, a perimeter approach would likely not affect the current ecological character and social and economic uses of the Calcasieu and Sabine passes and lakes. This alternative would modify some existing perimeter and build additional perimeter control structures.

Maps of Perimeter Structural Salinity Control Alternatives



Alternative M2 – Perimeter Structural Salinity Control
Control salinity with structures at Oyster Bayou, Longpoint Bayou, Black Lake, Alkali Ditch, GIWW, Cameron-Creole, East Sabine, Black Bayou, and at the Hwy 82 Causeway. Introduce freshwater across Hwy 82 in several locations throughout the Mermentau Basin. Utilize the Calcasieu Ship Channel for beneficial use/marsh creation. Stabalize Gulf Shoreline from Mermentau Ship Channel to near Rollover Bayou.

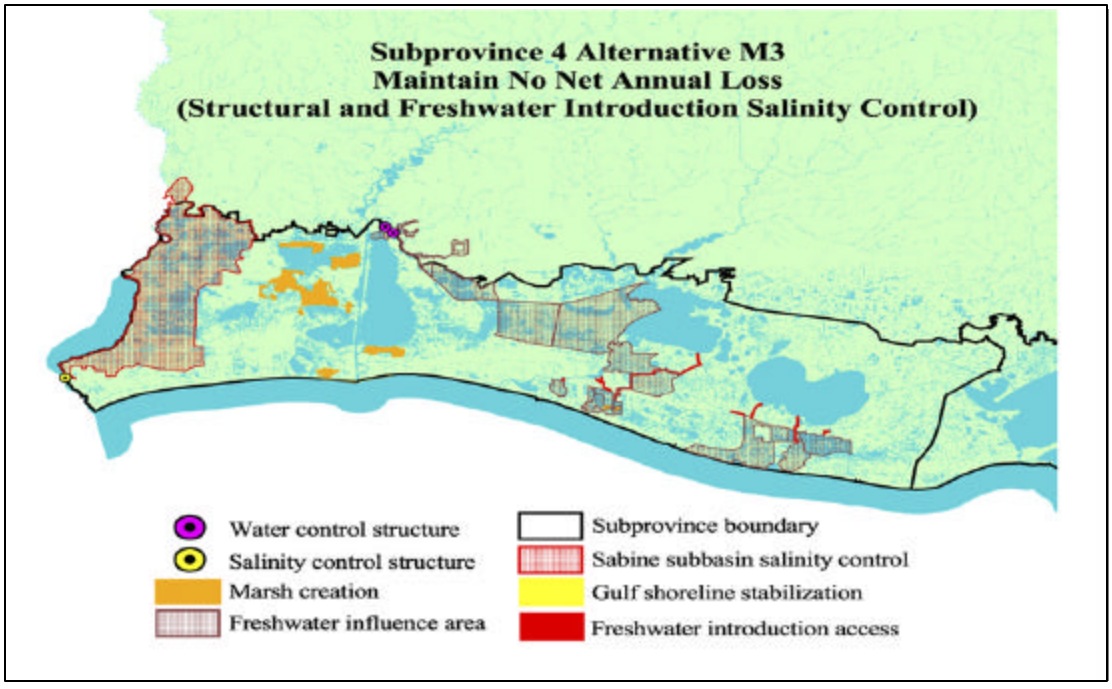


Alternative E2 – Perimeter Structural Salinity Control
Control salinity with structures at Oyster Bayou, Longpoint Bayou, Black Lake, Alkali Ditch, GIWW, Cam-Creole, East Sabine, Black Bayou, and at the Hwy 82 Causeway. Introduce freshwater across Hwy 82 in several locations throughout the Mermentau Basin. Utilize the Calcasieu Ship Channel for beneficial use/marsh creation. Restore marsh using dedicated dredging. Stabilize Gulf Shoreline from Mermentau Ship Channel to near Rollover Bayou.

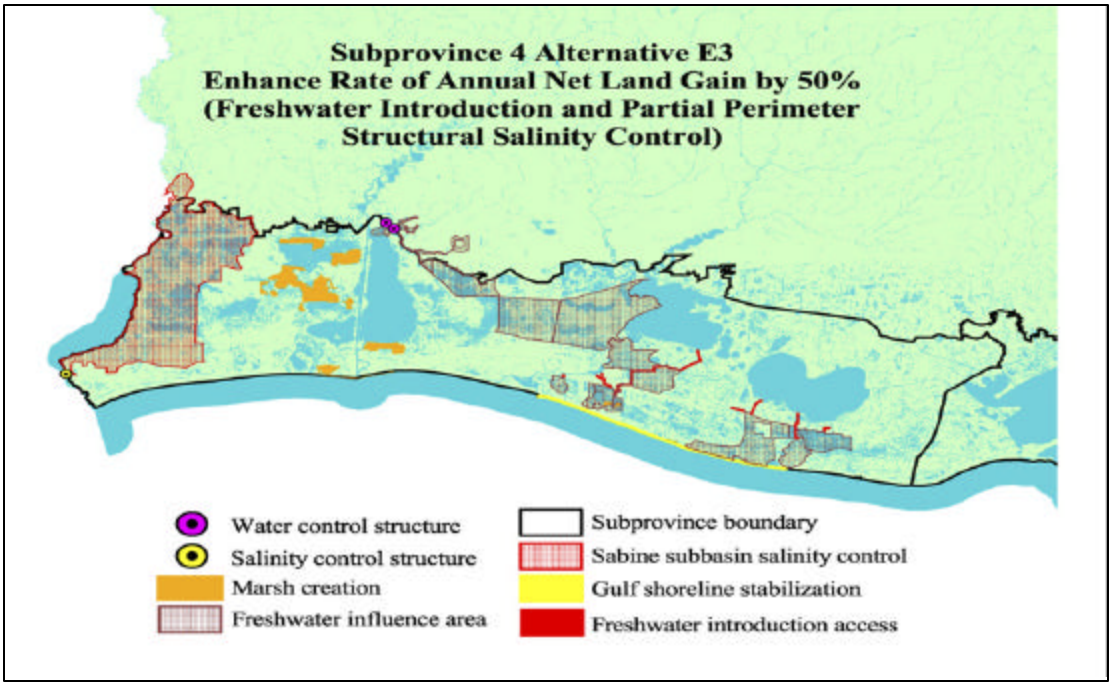
Structural and Freshwater Introduction Salinity Control

Alternatives developed under this approach rely less on structural salinity reducing features and more on hydrologic modifications, to bring additional freshwater into the northern portion of the estuaries, as the primary means for reducing salinities. Specifically, these alternatives would use culverts and other existing structures as conduits for increased flow of freshwater, which in turn would reduce salinity levels within the Calcasieu and Sabine estuaries. Freshwater introduction across Highway 82 in the Mermentau Basin will aide to reduce salinities in the Chenier sub-basin. Such alternatives would be intended to aid in the restoration of more natural hydrologic regimes, while having the added benefit of minimizing potential adverse socio-economic impacts associated with the structural measures considered in the first two approaches — particularly with respect to the restriction of organism and material linkages and impacts to navigation.

Maps of Structural and Freshwater Introduction Salinity Control Alternatives



Alternative M3 – Structural and Freshwater Salinity Control
Control salinity with a rock weir at Hwy 82 Causeway. Introduce freshwater in Calcasieu Subbasin at Calcasieu Lock and Black Bayou and across Hwy 82 in several locations throughout the Mermentau Basin. Utilize the Calcasieu Ship Channel for beneficial use/marsh creation. Restore marsh using dedicated dredging.



Alternative E3 – Freshwater Introduction and Partial Structural Salinity Control
Control salinity with a rock weir at Hwy 82 Causeway. Introduce freshwater in Calcasieu Subbasin at Calcasieu Lock and Black Bayou and across Hwy 82 in several locations throughout the Mermentau Basin. Utilize the Calcasieu Ship Channel for beneficial use/marsh creation. Restore marsh using dedicated dredging. Stabilize Gulf Shoreline from Mermentau Ship Channel to near Rollover Bayou.

The LCA, a Coastwide Plan

By understanding how the concepts from the Coast 2050 strategies interact to change the ecosystem, we can propose a balanced comprehensive coastwide plan that provides for a sustainable ecosystem. The subprovince alternatives will serve as a basis for future evaluations within the process being developed to select a coastwide restoration plan. To attain public input on the subprovince alternatives, their costs, benefits, and the future direction, study team members will be at Houma Municipal Auditorium – May 27; Estuarine Habitat and Coastal Fisheries Center, Lafayette – May 28; Lake Charles Civic Center – May 29; and UNO Lindy Boggs International Conference Center , New Orleans – June 2.